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(71) 出願人 （米国を除くすべての指定国について）
シャープ株式会社(SHARP KABUSHIKI KAISHA)[JP/JP]
〒545-8522 大阪府大阪市阿倍野区長池町22番22号 Osaka, (JP)
(72) 発明者；および
(75) 発明者／出願人 （米国についてのみ）
中村三津明(NAKAMURA, Mitsuaki)[JP/JP]
〒632-0073 奈良県天理市田町198-3レオパレスウエスト
一ト301号室 Nara, (JP)
岩崎圭介(IWASAKI, Keisuke)[JP/JP]
〒636-0154 奈良県生駒郡斑鳩町龍田西6-9-15 Nara, (JP)
(74) 代理人
弁理士　西教圭一郎(SAIKYO, Keiichiro)
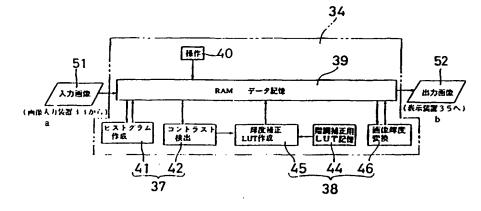〒541-0051 大阪府大阪市中央区備後町3丁目2番6号
敷島ビル Osaka, (JP)

(54)Title: **IMAGE PROCESSING DEVICE AND IMAGE PROCESSING METHOD**

(54)発明の名称　　画像処理装置および方法

(57) **Abstract**

In order to display an image on a display device whose gradation characteristics are nonlinear in an image processing device, first, a contrast estimation unit (37) estimates the contrast of an image expressed by image data (51) inputted from an image input device. Then, a luminance correction unit (38) subjects respective pixel data composing the image data (51) to a luminance conversion process based on the estimated contrast and the gradation characteristics. Further, the respective pixel data are sometimes subjected to a sharp-cut process. The level of the sharp-cut applied to one or a plurality of character regions in the image expressed by the image data (51) is higher than that applied to the pixel data of the pixels in the remaining regions other than the caracter regions in the image. Image data (52) composed of the pixel data subjected to those processes are supplied to the display device. With these processes, the visibility of the image displayed on the display device can be improved.

39... RAM DATA MEMORY

40 ... OPERATION

41 ... HISTOGRAM GENERATION

42 ... CONTRAST DETECTION

44 ... GRADATION CORRECTION LUT MEMORY

45 ... LUMINANCE CORRECTION LUT GENERATION

46 ... IMAGE LUMINANCE CONVERSION

51 ... INPUT IMAGE

a...FROM IMAGE INPUT DEVICE 33
b...TO DISPLAY DEVICE 35

ABSTRACT

In an image processing device, in order to display an image on a display device having nonlinear gradation characteristics, first, a contrast estimation unit (37) estimates the contrast of the image represented by the image data (51) input from an image input device. Next, a luminance correction unit (38) subjects the pixel data constituting the image data (51) to a luminance conversion process on the basis of the estimated contrast and the gradation characteristics. Furthermore, the pixel data may sometimes be subjected to a sharpening process. The level of the sharpening performed for one or a plurality of character regions in the image represented by the image data (51) is higher than that for the pixel data of the pixels in remaining regions other than the character regions in the image. The image data (52) comprising the pixel data subjected to these processes is supplied to the display device. Therefore, the visibility of the image displayed on the display device can be improved.